

REMARKS

Claims 48-49, 55-66, 70-71, 74-79, 81-84, 86-91, 142-144, 148-149, 157-179 are pending. Claims 48-49, 55-66, 70-71, 74-79, 81-84, 86-91, 142-144, 148-149, 158, and 160-162 have been withdrawn. Claim 85 has been canceled. By this amendment, claims 48-49, 55-66, 70, 74-78, 81-84, 86-88, 91, 142-144, 148-149, and 157-162 are amended, and new claims 163-181 are added. No new matter has been added.

Claims 157 and 159

Claims 157 and 159 stand rejected under 35 U.S.C. §102(b) as being anticipated by Oppelt et al. (U.S. Patent No. 5,759,162). Claims 157 and 159 stand rejected under 35 U.S.C. §102(e) as being anticipated by Haller et al. (U.S. Patent No. 6,010,316). Claims 157 and 159 stand rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Madanshetty (U.S. Patent No. 5,681,396).

Applicants have amended independent claim 157 to recite a vessel for holding at least one sample and including at least one inlet for flowing the at least one sample in a liquid medium into the vessel and at least one outlet for flowing the at least one sample in the liquid medium out of the vessel. Independent claim 157 has been further amended to recite an acoustic energy source spaced from and exterior to the vessel for providing at least one focused acoustic field, wherein at least a portion of acoustic energy from the acoustic energy source propagates exterior to the vessel.

Oppelt is directed to a method of administering ultrasound therapy non-invasively to a patient as well as treating benign prostate hyperplasia. The Office Action states that Oppelt discloses a “reaction vessel” (in this case a medical office) for holding a sample (a patient) which may flow into and out of the “reaction vessel” (the medical office via doors), and in which an acoustic energy source is provided for providing a focused acoustic field provided by the therapeutic ultrasound transducer having a diameter less than 2 cm.

Haller describes an acoustically driven micropump that functions by the interaction of longitudinal acoustic waves and the fluid in a microchannel. The Office Action states that Haller discloses a reaction vessel for providing flow of fluid samples into and out of a vessel via an inlet

and an outlet; and additionally having an acoustic energy source (transducer) which is focused to the 10 micron diameter of a channel. Referring to Fig. 5 of Haller, the acoustic wave generated by the piezoelectric transducer remains completely within the walls of the cone-shaped cavity.

Madanshetty teaches a method for cleaning a semiconductor wafer through induced cavitation on the surface of the wafer at the location of an adherent particle. The Office Action states that Madanshetty discloses a reaction vessel which may hold an immersed sample, and an acoustic field aimed at a portion of the wafer to provide “pin point” processing to the sample with length scales on the order of 1.5 mm and 5.0 microns.

Applicants point out that neither Oppelt, Haller, nor Madanshetty teach or suggest an acoustic energy source that is *spaced from and exterior to a vessel* for holding at least one sample. Referring to Oppelt, the ultrasound transducer (acoustic energy source) is located inside the medical office (vessel) and not outside of the office. In Haller, the piezoelectric transducer (acoustic energy source) is formed on the surface of the substrate of the device (vessel) and not exterior to the device (see col. 4, lines 18-19). Regarding Mandanshetty, there is no teaching for the ultrasonic sources to be spaced from and exterior to the vessel which houses the wafer to be cleaned. As a result, Applicants submit that none of the applied references disclose the acoustic energy source spaced from and exterior to the vessel, as recited in claim 157.

Because independent claim 157 distinguishes from the applied references, Oppelt, Haller, and Madanshetty, this claim should be allowed. As dependent claim 159 depends directly from claim 157, this claim should also be allowed. In addition, withdrawn claims 48-49, 55-66, 70-71, 74-79, 81-84, 86-91, 142-144, 148-149, 158, and 160-162 depend from claim 157 and should also be allowed.

Accordingly, withdrawal of these rejections is respectfully requested.

New Claims

New dependent claims 163-180 have been added and should be allowable for at least the same reasons as independent claim 157. Support for claims 163-165, and 167 can be found, for example, on page 16, lines 1-23 of the specification. Support for claim 166 can be found, for

example, on page 19, lines 22-27 of the specification. Support for claim 168 can be found, for example, on page 12, lines 24-31 of the specification. Support for claims 169-170 can be found, for example, on page 44, line 33 to page 45, line 15 of the specification. Support for claim 171 can be found, for example, on page 42, lines 25-33 of the specification. Support for claim 172 can be found, for example, on page 43, lines 23-33 of the specification. Support for claim 173 can be found, for example, on page 64, lines 1-5 of the specification. Support for claims 174-176 can be found, for example, on page 30, lines 24-34 of the specification. Support for claims 177-178 can be found, for example, on page 49, lines 1-17 of the specification. Support for claim 179 can be found, for example, on page 14, lines 1-19 of the specification. Support for claims 180-181 can be found, for example, on page 27, lines 14-29 of the specification.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the application in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

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Respectfully submitted,

By

Robert E. Hunt

Registration No.: 39,231

WOLF, GREENFIELD & SACKS, P.C.

Federal Reserve Plaza

600 Atlantic Avenue

Boston, Massachusetts 02210-2206

617.646.8000